



MAY 5, 2014

VOL. 34, NO. 12 ISSN 1041-1410

ISSUE DATES	9/2	9/16	10/7	10/28	11/18	12/9	1/13	2/3	3/3	3/24	4/14	5/5
-------------	-----	------	------	-------	-------	------	------	-----	-----	------	------	-----

Registration is now required for access to your online resources.
www.scholastic.com/math Your access code: exponent

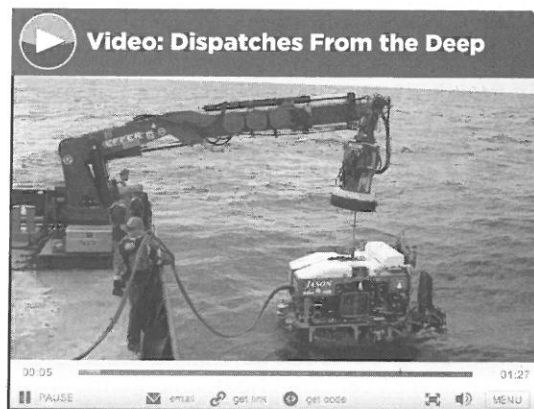
Summer is just around the corner. It's a time for cooling off at water parks, watching movies, and kicking around soccer balls. This issue of *MATH* covers it all—and more!

Be sure to check out our cover story, "Super Spiders," about *The Amazing Spider-Man 2* and some even more amazing real-life spiders. We also have a Spider-Man bonus: Scholastic has developed an exciting STEAM teaching package for you to extend your lesson. Visit

www.scholastic.com/amazingspiderman2 to get a collection of science- and technology-themed lessons, spiderweb art projects, and some awesome behind-the-scenes footage from the film.

Well, I'd better get back to planning for the 2014-15 school year. See you in September!

Best wishes,
 Karina Hamalainen, Editor
khamalainen@scholastic.com



SKILLS GUIDE

PAGE	SKILL & ARTICLE TITLE	COMMON CORE STATE STANDARDS	ONLINE RESOURCES: www.scholastic.com/math
4	Slope Splashdown!	Functions: Determine the rate of change of a function from two (x, y) values, including reading these from a table or from a graph.	<ul style="list-style-type: none"> Download two differentiated skills sheets. Watch an instructional video. Watch a background video.
6	Range Bar Graphs A New Crop of Apps	Statistics: Summarize numerical data sets in relation to their context.	<ul style="list-style-type: none"> Download a skills sheet.
8	Functions Dispatches From the Deep	Functions: Understand that a function is a mathematical rule that assigns to each input exactly one output.	<ul style="list-style-type: none"> Watch a background video.
12	Statistics The World Cup Is Coming	Statistics & Probability: Summarize numerical data sets in relation to their context.	<ul style="list-style-type: none"> Access a web link.
14	Mixed Skills Super Spiders	Mathematical Practices: Make sense of problems and persevere in solving them.	<ul style="list-style-type: none"> Download a skills sheet. Play a game.
16	Pythagorean Theorem Shailene's Big Year	Geometry: Apply the Pythagorean theorem to determine unknown side lengths in right triangles in real-world and mathematical problems.	<ul style="list-style-type: none"> Link to this issue's Real-World Math Mistake.

NAME: _____

Issue Skills Review

For use with the May 5, 2014, issue of Scholastic *MATH* magazine.
Fill in the letter of the correct answer, or write the correct answer on the line.

1 What is the slope of a line with the coordinates (16, 28) and (21, 30)?

- (A) $-\frac{2}{5}$ (B) $\frac{2}{5}$ (C) $\frac{4}{7}$ (D) $\frac{5}{2}$

2 Fill in the function table below.

Input	Function Rule: Multiply by 14	Output
1		
2		
3		
4		
5		

3 Your cell phone company charges \$0.10 per text sent. Make a function table showing how much you would have to pay to send and receive 50, 100, 150, and 200 texts.

4 What is the difference between a bar graph and a range bar graph?

5 How can you tell by looking at a line if a slope will be positive or negative without calculating the slope?

6 What is the slope of a line with coordinates (-12, -15) and (-8, -5)?

7 There are about 40,000 known spider species worldwide. About 3,000 of those are in North America. Approximately what percent of spider species are found in North America?

- (A) 0.075% (B) 7.5% (C) 13.3% (D) 75%

8 In a right triangle, $a = 15$ and $b = 8$. What is the measure of the hypotenuse c ?

- (A) 17 (B) 19 (C) 23 (D) 289

9 Complete the function table below.

x	$y = 3x + 6$	y
6		
12		
18		
24		
30		

10 In a right triangle, $a = 45$ and $c = 75$. What is the measure of side b ?

NAME: _____

Problem of the Day

Try one of these quick exercises each day as a fast, fun way to start your math lesson!

<p>DAY 1 The Verti-Go waterslide at the Aqualandia water park in Spain is 33 meters tall. How tall is the slide in feet? Hint: 1 meter is approximately 3.28 feet.</p>	<p>DAY 2 The Great Pyramid in Egypt has a volume of 2,433,400 cubic meters (m^3). Its square base measures 230 m per side. What is its height? (Hint: The volume of a square pyramid = $\frac{1}{3}lwh$)</p>	<p>DAY 3 Solve the function $f(x) = 4x - 7$ when $x = 10$.</p>	<p>DAY 4 The first World Cup was held in 1930. It's taken place every four years since. What years was the World Cup held between 1965 and 1975?</p>	<p>DAY 5 The U.S. has played 29 World Cup matches and won 7 of them. What percent, rounded to the nearest tenth of a percent, of games played did the U.S. win?</p>
<p>DAY 6 What is the slope of a line with the coordinates (7, 25) and (15, 3)?</p>	<p>DAY 7 A roller coaster's hill is 100 feet (ft) tall and 190 ft wide at its base. The ascending and descending sides are the same length. How long are they? Round to the nearest foot.</p>	<p>DAY 8 In the number 5,287.913, what place value does the number 3 hold?</p>	<p>DAY 9 When you divide two numbers, the answer is called a ____. A. factor B. quotient C. coefficient D. denominator</p>	<p>DAY 10 What is the circumference of a circle with a diameter of 18 inches?</p>
<p>DAY 11 You get \$10 a week in allowance and save the money. Write a function to show the total amount of money you have saved after each week.</p>	<p>DAY 12 To make a cloth from spider silk, workers collected 80 feet of silk from each of 1,200,000 golden orb weaver spiders. How many miles of silk did they collect? Round to the nearest tenth.</p>	<p>DAY 13 Seventh-grade students collected canned goods for a food drive. Five classes collected the following number of cans: 45, 23, 52, 30, and 22. What is the range of this data set?</p>	<p>DAY 14 Which type of graph would you use to display the total wins of the 10 top-ranked teams for the World Cup? A. circle graph B. line graph C. bar graph D. range bar graph</p>	<p>DAY 15 The world's smallest spider is the <i>Patu marplei</i>. The smallest ever found measured 0.043 centimeters in length. Write that spider's length in meters in scientific notation.</p>
<p>DAY 16 Use the correct symbol (<, >, or =) to complete the equation/inequality for when $x = 3$. $2x + 5$ ___ $3x - 6$.</p>	<p>DAY 17 Which 2-D shape will you get if you slice an upright cylinder with a radius of 5 inches and a height of 20 inches in half vertically?</p>	<p>DAY 18 Reduce the following fraction to its simplest form: $\frac{96}{128}$.</p>	<p>DAY 19 For every 99 feet an object descends in the ocean, the pressure increases by 3 bars. Write a unit ratio explaining how depth relates to pressure.</p>	<p>DAY 20 Sally and Louise are playing a game. They reach into a bag and choose colored tokens. In the bag are 10 blue and 5 red tokens. What is the probability that a Sally will pick a blue token?</p>

Scholastic Inc. grants teacher-subscribers of *MATH* magazine permission to reproduce this page for use in their classrooms.
©2014 by Scholastic Inc. All Rights Reserved.

COVER

Spider-Math

23.7% of the total gross was earned opening weekend.

PAGES 2-3

Numbers in the News

• MONUMENTAL MILESTONE

The heights of the three floors are $f = 187$ feet, $s = 377.3$ feet, and $t = 905.5$ feet.

• STUCK ON YOU

They used 120 rolls of tape.

• BATTY FROM THE HEAT

The temperature is 109.4°F.

• DO THE MATH!

The cave is 586 feet long.

PAGE 4

Splashdown!

- $-\frac{29}{39}$
- $-\frac{10}{23}$
- $\frac{51}{112}$
- $-\frac{51}{112}$. It's the negative of the slope in No. 3.
- 0

PAGE 6

A New Crop of Apps

- April
- a. lima beans
b. pumpkins
- about 2 months
- lima beans on around July 1
- because you can have two plantings in one summer

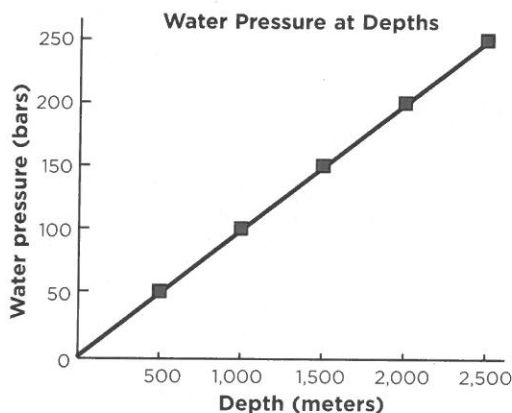
PAGE 8

Dispatches From the Deep

1.

Input	Function Rule	Output
Depth (meters)	Divide by 10	Water Pressure (bars)
0	$0 \div 10$	0
500	$500 \div 10$	50
1,000	$1,000 \div 10$	100
1,500	$1,500 \div 10$	150
2,000	$2,000 \div 10$	200
2,500	$2,500 \div 10$	250

- 250 bars
- $d \div 10 = p$ or $d = 10p$
- 500 bars
- 650 bars
- 1,089.8 bars
- 15,802.1 psi
- see graph below



PAGE 12

The World Cup Is Coming

- C
- B
- B
- B
- A
- D
- 19.6%
- North & Central America and Asia
- about 3,588,000 people (Please accept all reasonable answers.)
- about 3,072,000 people (Please accept all reasonable answers.)

PAGE 14

Super Spiders

- 2.5 feet
- 87.5%
- a. 1,219 spiders
b. 28.26 square feet
- 0.125 inches
- 11 meters

BACK PAGE

Shailene's Big Year

- A
- B
- A
- A
- B

To find the answers online, click on "Teaching Resources."

TG PAGE 5

Skills Review

1. B

2.

Input	Function Rule	Output
1	1×14	14
2	2×14	28
3	3×14	42
4	4×14	56
5	5×14	70

3.

Input	Function Rule	Output
50	$50 \times \$0.10$	\$5
100	$100 \times \$0.10$	\$10
150	$150 \times \$0.10$	\$15
200	$200 \times \$0.10$	\$20

4. A bar graph shows a single amount per item, but a range bar graph shows a range of values.

5. If the line slants upward, you know the slope is positive. If the line slants downward, you know the slope is negative.

6. $\frac{5}{2}$ 7. B 8. A

9.

x	$y = 3x + 6$	y
6	$3 \times 6 + 6$	24
12	$3 \times 12 + 6$	42
18	$3 \times 18 + 6$	60
24	$3 \times 24 + 6$	78
30	$3 \times 30 + 6$	96

10. $b = 60$

TG PAGE 6

Problem of the Day

1. 108.24 feet

2. 138 meters

3. $f(10) = 33$

4. 1966, 1970, and 1974

5. 24.1% 6. $-\frac{11}{4}$ 7. 138 feet

8. the thousandths place

9. B 10. 56.52 inches

11. $f(x) = 10x$

12. 18,181.8 miles 13. 30

14. C 15. 4.3×10^{-4} meters

16. $>$ 17. rectangle 18. $\frac{3}{4}$

19. $\frac{33 \text{ feet}}{1 \text{ bar}}$

20. $\frac{2}{3}$

To find the answers online, click on "Teaching Resources."

FREE MATH PRINTABLES FROM THE ACTUARIAL FOUNDATION.
VISIT WWW.SCHOLASTIC.COM/UNEXPECTEDMATH

Don't miss out on the digital resources that come with your subscription at

www.scholastic.com/math

Online resources are now available only to subscribers. To register, all you'll need is your exclusive access code: **exponent**. Don't miss out on:

- **DOWNLOADABLE SKILLS SHEETS** provide more math problems.
- **INSTRUCTIONAL VIDEOS** teach step-by-step math lessons.
- **BACKGROUND VIDEOS** give real-world and cross-curricular tie-ins.
- **MATH GAMES**

SCHOLASTIC MATH Editor: Karina Hamalainen **Associate Editor:** Linda Buchwald **Design Director:** James Sarfati **Photo Editor:** Lois Safrani **Production Editor:** Allan Molho **Senior Marketing Manager:** Allicia Clark **Senior Copy Editors:** Ingrid Accardi, Suzanne Bilyeu **Copy Editor:** Troy Reynolds **Media Editor:** Marie Morreale **Education Editor:** Matt Friedman **Executive VP, Scholastic:** Hugh Roome **Creative Director:** Judith Christ-Lafond **Editorial Director:** Patricia Janes **Executive Director of Production and Operations:** Barbara Schwartz **Publishing Systems Director:** David Hendrickson **Executive Editorial Director, Copy Desk:** Craig Moskowitz **President, Chief Exec. Officer, and Chairman of the Board of Scholastic Inc.:** Richard Robinson. © 2014 Scholastic Inc. **SCHOLASTIC** and **Scholastic MATH** and associated logos are trademarks and/or registered trademarks of Scholastic Inc. All rights reserved. Materials in this issue may not be reproduced in whole or in part in any form or format without special permission from the publisher.

POSTAL INFORMATION: SCHOLASTIC MATH MAGAZINE (ISSN 0198-8379; in Canada, 2-c no. 9386; USPS 567-350) is published 12 times during the school year; biweekly September, October, March; monthly November, December, January, February, April, May; by Scholastic Inc., 2931 E. McCarty St., P.O. Box 3710, Jefferson City, MO 65102-3710. Periodical postage paid at Jefferson City, MO 65102 and additional mailing offices. **POSTMASTERS:** Send notice of address changes to SCHOLASTIC MATH MAGAZINE, 2931 East McCarty St., P.O. Box 3710, Jefferson City, MO 65102-3710. **PUBLISHING INFORMATION:** U.S. prices: \$8.25 each per year, \$5.45 per semester, for 10 or more subscriptions to the same address. Fewer than 10 subscriptions, each: \$24.95 student, \$29.99 Teacher's, per school year. Single copy: \$5.50 student, \$6.50 Teacher's. Communications relating to subscriptions should be addressed to SCHOLASTIC MATH MAGAZINE, 2931 East McCarty Street, P.O. Box 3710, Jefferson City, MO 65102-3710, or call toll-free: 1-800-SCHOLASTIC, or on the Web, www.scholastic.com/custsupport. Communications relating to editorial matter should be addressed to Karina Hamalainen, SCHOLASTIC MATH MAGAZINE, 557 Broadway, New York, NY 10012-3999. E-mail address: MathMag@scholastic.com. ©2014 by Scholastic Inc. All rights reserved. Material in this issue may not be reproduced in whole or in part in any form or format without special permission from the publisher.

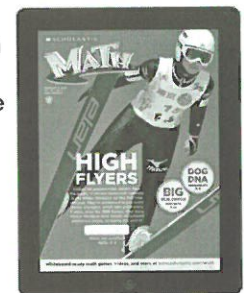
SCHOLASTIC

MATH!
is now on iPad!

Introducing the
**Scholastic Classroom
Magazines—Student
Edition App!**

Explore:

The new **Scholastic Classroom Magazines—Student Edition App** puts the best features of the **Scholastic MATH** website right at your students' fingertips.



Download Today on the App Store

Simply search for "**Scholastic Classroom Magazines**" and download the new student app. Just enter your Classroom Password* when prompted, and you're ready to go!



Coming Soon! Google play for Android™ Tablets

*If you do not have a Classroom Password, please visit www.scholastic.com/math and activate your **Scholastic MATH** Online account.

837-SDM-S14